

U.S. Department of Justice
Drug Enforcement AdministrationSouth Central Laboratory
Dallas, TX

Chemical Analysis Report

Dallas Division Office
10160 Technology Boulevard, East
Dallas, TX 75220Case Number: M1-19-0017
LIMS Number: 2020-SFL6-04325

Observations, Results and Conclusions:

Exhibit	Substance(s) Identified	Net Weight	Substance Purity	Amount Pure Substance
730.01	Cocaine Hydrochloride	24765 g \pm 2 g	----	----
730.01	Phenacetin		----	----
730.01	Phenyltetrahydroimidazothiazole		----	----
730.02	Heroin Hydrochloride	496 g \pm 1 g	----	----
730.03	No Controlled Substances	5.30 g \pm 0.01 g	----	----

Remarks:

Exhibit# 730.01: The net weight was determined by direct weighing of all unit(s); the net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

Exhibit# 730.02: The net weight was determined by direct weighing of all unit(s); the net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

Exhibit# 730.03: The net weight was determined by direct weighing of all unit(s); the net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

Exhibit Details:

Date Accepted by Laboratory: 06/23/2020

Gross Weight: 29.89 kg

Date Received by Examiner: 08/19/2020

Exhibit	No. Units	Pkg. (Inner)	Form	Reserve Wt.
730.01	30	Multilayered Packaging	Powder	24761 g
730.02	1	Multilayered Packaging	Powder	496 g
730.03	1	Ziplock Plastic Bag	Powder	5.24 g

Remarks:

Original evidence submitted for latent print examination.

Exhibit# 730.01: 3.7 gram(s) removed from a total of 3 containers for special program.

Exhibit# 730.01: 13.74 kilograms held for destruction pending written notification.

Exhibit Analysis:

Sampling:

The terminology used in the preparation of this report is consistent with the current Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations.

Analyzed By: /S/ Paul S. Kusko, Senior Forensic Chemist
Approved By: /S/ John W. McIlroy, Senior Forensic ChemistDate: 09/16/2020
Date: 09/16/2020



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Exhibit# 730.01: Cocaine confirmed in 30 units tested of 30 units received. Phenacetin and Phenyltetrahydroimidazothiazole also confirmed in 1 of the units tested. A composite was formed from 15 units for further testing. Salt form determined from testing the composite.

Exhibit# 730.02: A composite was formed from 1 unit for testing of 1 unit received. Heroin confirmed in the composite. Salt form determined from testing the composite.

Exhibit# 730.03: No controlled substance(s) identified in unit(s) tested of 1 unit(s) received. A composite was formed from 1 unit for further testing.

Exhibit	Summary of Test(s)
730.01	Cobalt (II) Thiocyanate Color Test, Gas Chromatography/Mass Spectrometry, Infrared Spectroscopy
730.02	Gas Chromatography/Mass Spectrometry, Infrared Spectroscopy, Marquis Color Test
730.03	Cobalt (II) Thiocyanate Color Test, Gas Chromatography/Mass Spectrometry, Infrared Spectroscopy

The terminology used in the preparation of this report is consistent with the current Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations.

Analyzed By: /S/ Paul S. Kusko, Senior Forensic Chemist
Approved By: /S/ John W. McIlroy, Senior Forensic Chemist

Date: 09/16/2020
Date: 09/16/2020



Paul Steven Kusko
Department of Justice
Drug Enforcement Administration
Office of Forensic Science

Supervisory Forensic Chemist
Western Laboratory
Pleasanton, CA

AREA OF EXPERTISE

Forensic Discipline

Seized Drugs

Expert Testimony

- COURT APPEARANCES: 68 total appearances
- Testimony 2019 – Present
 - 10/08/2020, Lufkin, TX., United States v. Adam Tello, 9:19-CR-00027
 - 04/20/2021, Corpus Christi, TX., US v. Sammy Perez Treo, 19-CR-1793-02
 - 07/25/2022, Houston, TX., US v. Carlos Alberto Guajardo et al, 3:18-CR-0022
 - 08/22/2022, Jackson, MI., US v. Arthur Wilson et al, 5:19-CR-00011 KHJ-FKB

PROFESSIONAL EXPERIENCE

DRUG ENFORCEMENT ADMINISTRATION

Supervisory Forensic Chemist - DEA Western Laboratory; Pleasanton, TX.; 08/2022-Present

- Supervises general laboratory activities and the analytical work of a group of forensic, clerical, or technical employees.
- Establishes guidelines and performance expectations for staff members, which are clearly communicated through the formal employee performance management system. Observes workers' performance; demonstrates and conducts work performance critiques.
- Provides technical, administrative and authoritative advice and consultation on a broad-range of matters related to forensic chemistry.
- Monitors and enforces the policies for the strict chain of custody (security) procedures in handling, analysis, and preservation of evidence.
- Consults with attorneys and law enforcement officials in a variety of technical areas. Serves as an expert court witness and provides written reports on findings and conclusions of laboratory analysis that explain the results and validity of testing.
- Reviews reports and documentation, including in areas such as inspections, investigations, and laboratory analysis in order to evaluate impacts on the organization. Writes DEA position in response to requests for advisory opinions from Congress, department officials, or a regulated industry.

Training

- San Francisco Federal Executive Board Leadership Development Program – San Francisco, CA.

Senior Forensic Chemist - DEA South Central Laboratory; Dallas, TX.; 2007-2022

- Forensic chemist duties include the identification of controlled substances via chemical and instrumental techniques, reporting conclusions, and testifying to those conclusions in a court of law.
- Assisting law enforcement in clandestine laboratory response and training of chemists and law enforcement in the identification of controlled substances.
- Instrument monitor duties include maintenance and troubleshooting of analytical instruments to include maintenance and troubleshooting of 1 Gas chromatograph's (GC), 1 Gas chromatograph/Mass Spectrometer (GC/MS), 1 Infrared Spectrophotometer.
- Alternate Security Specialist duties include maintaining the security of DEA property, evidentiary material, and personnel.
- Acting Group Supervisor duties include technical reviews, maintenance of administrative systems, data system management, personnel management and other supervisory duties as appropriate.
- Coordinator for DEA South Central Laboratory's Lecture Series. A bi-annual forum which provides training and collaboration for federal, state, and local law enforcement Forensic Chemists, Analysts, and Medical Examiners throughout the south central United States.

Training

- Raman Spectroscopy - DEA South Central Laboratory Dallas, TX.
- Nuclear Magnetic Resonance - DEA South Central Laboratory Dallas, TX
- DEA Lecture Series; Dallas, TX.; 06/2016 - Control Actions under the CSA; Drug Trends and Pill Mills; Synthetic Drug Related Illnesses and Deaths; Analytical Methods; Toxicology of Opiates
- DEA Lecture Series; Dallas, TX.; 02/2017 - Fentanyl Emerging Trends and Analysis; Fentanyl Exposure and Impacts; Guide to Illicit field testing; Methamphetamine Quantitation, Legislative Updates, and Analysis of Edibles; Legal Trends in Forensic Chemistry; Mass Spectrometer Structural Elucidation
- DEA Lecture Series; Dallas, TX.; 08/2017 - Optimizing important GC Parameters; Cocaine Signature Program Updates; Infrared Vapor Spectra of Synthetic Cannabinoids; Energetic Materials, and the Forensic Laboratory; Drug Facilitated Crimes; Rapid Illicit Drug Synthesis
- DEA Lecture Series; Dallas, TX.; 03/2018 - SWGDRUG Updates, Optimizing LC Methodologies; Forensic Applications of FTIR and Raman; Drug Facilitated Crimes; Rapid identification of Illicit Drugs with a hand portable GC/MS
- Illicit Drug Trafficking in Indian Country; Albuquerque, NM; 06/2018 - Investigative Techniques Related To The Enforcement Of Illicit Drug Trafficking In Indian Country
- DEA Lecture Series; Dallas, TX.; 11/2018 - qTOF LC/MS for Drug Analysis, GC/MS Fast Drug Screening; Synthetic Chemical case study; Identification of One Pot Methamphetamine Laboratories via Waste Water Monitoring; Leadership in Law Enforcement; Overview of Toluca, Mexico Fentanyl Lab.
- Illicit Drug Trafficking in Indian Country; Tulsa, OK; 04/2019 - Investigative Techniques Related To The Enforcement Of Illicit Drug Trafficking In Indian Country
- HPLC and LCMS analysis; Webinar, 03/24/2020 - Agilent Technologies training on HPLC and LCMS

Forensic Chemist - DEA South Central Laboratory; Dallas, TX.; 2002-2007

- Forensic chemist duties include the identification of controlled substances via chemical and instrumental techniques, Reporting conclusions, and testifying to those conclusions in a court of law.
- Assisting law enforcement in clandestine laboratories and training of chemists and law enforcement in the identification of controlled substances.
- Instrument monitor duties include maintenance and troubleshooting of Instrument monitor duties include maintenance and troubleshooting of 2 Gas chromatograph's (GC), 1 Gas chromatograph/Mass Spectrometer (GC/MS), 1 High performance Liquid Chromatograph (HPLC), and backup on a GC, GC/MS, Gas chromatograph/Infrared Detector.
- Acting Group Supervisor duties include technical reviews, maintenance of administrative systems, data system management, personnel management and other Group Supervisor duties as appropriate.

Training

- Infrared Spectroscopy - DEA South Central Laboratory Dallas, TX.
- Mechanistic Examination of Ephedrine Reduction Via Red P/12 & Li/NH₃ - Dr. Harry Gibson, DEA South Central Laboratory, Dallas, TX.
- IONSCAN 400B Training - Smiths-Barringer, DEA South Central Lab; Dallas, TX.
- Gas Chromatography - Agilent Technologies, DEA South Central Laboratory Dallas, TX.

Forensic Chemist - DEA Southwest Laboratory; National City, CA.; 2000-2002

- Forensic chemist duties include the identification of controlled substances via chemical and instrumental techniques, Reporting conclusions, and testifying to those conclusions in a court of law.
- Assisting law enforcement in clandestine laboratories and training of chemists and law enforcement in the identification of controlled substances.
- Instrument monitor duties include maintenance and troubleshooting of 1 Gas chromatograph (GC), and backup on a GC, GC/MS, and Gas chromatograph/Infrared Detector.

Training

- Forensic Chemist Training Program - 2000-2001 DEA: National City, CA.

Tenerx Corp.

Environmental Chemist - Friendswood, TX; 1996-2000

- Environmental Chemist duties consisted of testing gaseous, liquid, and particulate samples to determine federal, state, and local emission compliance through source testing.
- Qualitative and quantitative analysis utilizing wet chemistry techniques
- Instrumental analysis utilizing Gas chromatograph's (GC), High performance Liquid Chromatograph's (HPLC), and various compound specific instruments.

EDUCATION AND CERTIFICATIONS

University of Houston - Clear Lake; Houston, Tx., Bachelor of Science – Chemistry

Certification(s)

- Basic Forensic Chemist School #10 - 07/2000 DEA; Quantico, VA.
- Clandestine Laboratory Certification School #20 - 07/2000 DEA; Quantico, Va.
- Forensic Chemist Training Program - 2000-2001 DEA: National City, CA.
- Infrared Spectroscopy - 08/2002 Bowdoin College; Brunswick, ME.
- Principles and Applications for Capillary Electrophoresis Analysis of Seized Drugs - DEA; Sterling, VA.
- DEA Level A High Hazard Laboratory Response #12; 12/2016 Valencia, CA.
- Advanced Site Safety Officer - 04/2018 Quantico, VA.

PROFESSIONAL AFFILIATIONS

- Southwest Association of Forensic Chemists (SWAFS) – Member (non-active)

PRESENTATIONS AND LECTURES

- Instructor, Federal Law Enforcement Training Center (FLETC) – Drug Identification and Field Test Training
- Instructor, Arkansas State and Local Law Enforcement (09/2004) Fordyce, AR.
- Instructor, Arkansas State and Local Law Enforcement (09/2004) Fayetteville, AR.
- Instructor, State and Local LEO Clandestine Laboratory Certification Schools - SALC 182, SALC 261, SALC 269, SALC 313, (2003-2016) Quantico, VA,; Tulsa, OK.
- Instructor, DEA Basic Agent #39, Clandestine Laboratory Certification Schools, Quantico, VA.
- National Guard LEO Clandestine Laboratory Certification Schools - NG81 (12/2010), NG84 (05/2012) Instructor, San Marcos, TX.; Tulsa, OK .
- Clandestine Laboratory Safety Seminar; 09/2013 Instructor, Almaty, Kazakhstan
- DEA Dallas Division training course – Drug Identification and Field Test Training, Instructor, Tulsa, OK. (09/2014), Abilene, TX., (02/2015), Denton, TX. (06/2015), Tyler, TX. (09/2015)
- DEA South Central Laboratory training course - Controlled Substance Hazmat for First Responders (03/2016) Instructor, Dallas, TX..
- John Peter Smith Hospital. – Drug Identification and Trends (04/2016) Instructor, Fort Worth, TX.
- DEA Albuquerque training course. – Drug Identification and Trends (05/2016) Instructor, Albuquerque, NM.
- FBI Dallas Division - Methamphetamine Liquid Handling and Sampling (10/2016) Instructor, Dallas, TX.
- Southlake Police Training Center - Fentanyl and Emerging Drug Trends (11/2016) Instructor, Southlake, TX.
- DEA South Central Laboratory training course – Law Enforcement Officer Training (12/2016) (08/2017) (05/2018) (08/2019) Instructor, Dallas, TX..
- Fentanyl trends and Safety for Law Enforcement Officers (03/2017) Instructor, San Antonio, TX.

- DEA Dallas Division training course. – Drug Identification and Trends (09/2017) Instructor, Dallas, TX.
- Oklahoma City Fire and Police departments - Fentanyl hazards for First Responders (09/2017) Instructor, Oklahoma City, OK.
- Level A High Hazard Clan Response - DEA High Hazard School (01/2018) (10/2018) Instructor, Valencia, CA.
- Illicit Drug Trafficking in Indian Country, Opiate Drug Recognition (06/2018) Instructor, Albuquerque, NM
- DEA El Paso Field Division Fentanyl training - Fentanyl and Emerging Drug Trends (08/2018) Instructor, El Paso, TX.
- Investigative Techniques Related to the Enforcement of Illicit Drug Trafficking in Indian Country - Drug recognition of Opiates and Methamphetamine (09/2018) Instructor, National Advocacy Center, Columbia, SC.
- Investigative Techniques Related to the Enforcement of Illicit Drug Trafficking in Indian Country - Emerging Trends of Illicit Substances (04/2019) Instructor, Tulsa, OK.
- HIDTA, Texas Southern Border - Fentanyl and Emerging Drug Trends (09/2019) Instructor, McAllen, TX.; Laredo, TX.; San Antonio, TX.
- DEA Dallas Field Division Fentanyl training - Fentanyl and Emerging Drug Trends (02/2020) Instructor, Dallas, TX.
- International Law Enforcement Academy - Emerging Trends in Illicit Synthetic Drug Production Techniques (01/2020) Instructor, Budapest, Hungary
- International Law Enforcement Academy - Emerging Trends in Illicit Synthetic Drug Production Techniques (02/2020) Instructor, Budapest, Hungary
- Level A High Hazard Clan Response - DEA High Hazard School (06/2021) Instructor, Valencia, CA.

DISTINCTIONS

- Exceptional Performance Award; 09/2004
- Exceptional Performance Award; 09/2005
- On the Spot Award; 08/2006
- On the Spot Award; 08/2007
- On the Spot Award; 08/2008
- On the Spot Award; 05/2017
- On the Spot Award; 05/2018
- Exceptional performance Award; 02/2020
- On the Spot Award; 05/2021
- On the Spot Award; 05/2022



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Dallas, TX 75220

www.dea.gov

TO: Ernest Gonzalez
Assistant U. S. Attorney

FROM: Paul S. Kusko
Senior Forensic Chemist
DEA South Central Laboratory

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN
UNITED STATES v. Debra Mercer-Erwin, et al.
DEA LIMS Case Number(s): 2020-SFL6-02252

Date: March 31, 2016

The following summary of testimony is provided as required by Federal Rule of Criminal Procedure 16(a)(1)(G) and is a complete statement of my opinions, which are exclusive to and address only the exhibit(s) identified in this summary:

1. My name is: Paul S. Kusko
2. I am employed by the U.S. Department of Justice, Drug Enforcement Administration (DEA), in the capacity of Supervisory Forensic Chemist, and was so employed when I conducted the examinations and analyses described below. My qualifications to conduct the examinations and analyses, and to express an opinion as to the identity of the material contained in the exhibit(s) described below, are based on my knowledge, skill, experience, training, and education. See my attached Curriculum Vitae for additional information regarding my qualifications, including previous testimony offered in the last four years and any publications authored in the last ten years.
3. The opinions described below are based on the following chemical, physical, and instrumental analyses, the results generated by those analyses, and my interpretation of those results set forth in the previously provided Laboratory Report and analyst notes.

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The manner and process by which I performed the analyses were, to the best of my knowledge, in accordance with the publicly available Analysis of Drugs Manual (ADM) and Laboratory Operations Manual (LOM), in effect at the time of analysis. These are generally available at:

https://www.dea.gov/resources/documents?f%5B0%5D=publication_type%3A2596, or were otherwise disclosed upon request.

4. I analyzed the material contained in the exhibits which were submitted for analysis in the above referenced case number(s). My conclusions are included as part of previously provided forensic laboratory reports and analyst notes.
5. The material referred to herein as exhibit #1, as represented in the forensic laboratory reports and accompanying case file, has been identified as follows:
 - a. Substance(s) identified: Cocaine Hydrochloride*
 - b. Net weight: 20.00 kg \pm 0.03 kg **
 - c. Purity of N/A:
 - d. A statistical sampling approach based on the probability theory of the hypergeometric distribution was used.

The above opinion is based on the following physical, chemical, and instrumental analyses:

- i. Gas Chromatography/Mass Spectrometry
- ii. Infrared Spectroscopy
- iii. Cobalt (II) Thiocyanate Color Test

The analytical methods used in the above analyses are validated and verified according to our quality assurance policy to ensure the methods are reliable and fit-for-purpose and the techniques utilized are widely accepted and employed in the scientific and forensic community. Summaries of instrumental methods are available at:

https://www.dea.gov/resources/documents?f%5B0%5D=publication_type%3A2596

*Cocaine confirmed in 15 units tested of 20 units received indicating, to at least a 95% level of confidence, that at least 90% of the units in the population contain the substance(s). A composite was formed from 15 units for further testing. Salt form determined from testing the composite.

**The net weight was determined by direct weighing of all unit(s); the net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN
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DEA LIMS CASE NUMBER(S): 2020-SFL6-02252

6. This report, its attachments, and the referenced documents are not an exhaustive or complete recitation of testimony that I may offer. In addition, I may offer opinions in response to questions posed during trial.

Pursuant to Fed. R. Crim. P. 16(a)(1)(G)(v), I approve the foregoing disclosure.

Paul S. Kusko, DEA Senior Forensic Chemist

Date: 3/31/2023

APPROVED: _____

Steven L. Aliyetti, Acting Laboratory Director

Date: 3/31/2023

Attachment